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SEXUAL DIMORPHISM AND VARIATION IN GINKGO
BILOBA, L.

BY N. M. GRIER

Nurserymen claim to be able to distinguish the sex of this tree by the habit assumed. According to their observations, the male tree while retaining the conical type of stem characteristic of the family, tends to approximate the columnar aspect as exhibited for instance in the Lombardy poplar. On the other hand they state the outline of the female tree is far broader at the region of lowest branching, *i. e.*, the outline of the female tree is a cone with a much larger base than that of the male. Personal observation of the fruiting trees seemed to confirm the difference claimed by the nurserymen, although some intergrades were found. The available literature contained no reference to any sexual dimorphism whatsoever nor to the following distinction between male and female trees based on leaves taken from the lower branches of 5 trees in the Shaw Botanical Garden and Tower Grove Park in St. Louis.

As has probably been observed, a large proportion of leaves of ginkgo are entire or devoid of true lobing, although they may become frayed and indicate a false division. Of a total of 535 leaves examined from 2 male trees, 322 showed a true lobing, generally into 2 well marked, but often 3 or 4 divisions less marked—60 per cent. In the 3 female trees, the proportion of bilobed or divided leaves is much less, 103 of 645 or 13 per cent. of the total. This condition of greater abundance of dissected leaves in the male seem to correlate with the distinction made by the nurserymen. The female tree, a broad-based cone consisting of excurrent trunk with branches diverging therefrom from base to apex at a constantly decreasing angle, would not require the same adaptation for lighting that the spire-like contour of the male would, which therefore may account for the greater abundance of dissected leaves in the male.

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